

Reply to Office Action dated February 18, 2005

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A method of driving a PDP (Plasma Display Panel) including a pair of substrates, a plurality of address electrodes formed on one of the substrates and scan electrodes to the number of N formed to intersect the address electrodes, wherein the method of driving comprises:

dividing a field of an input video signal into a plurality of sub-fields having brightness weights; and

applying a scan pulse to the scan electrodes to the number of N in order and simultaneously applying an input video data signal pulse to the plurality of address electrodes, in each sub-field, to have an address period designating cells to be displayed and a sustain period applying a sustain pulse to the designated cells according to the brightness weight of the corresponding sub-field,

wherein the plurality of sub-fields include sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of N in order of 1, 2, . . . , N-1 and N, and sub-fields, which have the address period applying the scan pulse to the scan electrodes in order of N, N-1, . . . , 2 and 1.

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2. (Previously Presented) The method according to claim 1, wherein the sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of N in order of 1, 2, . . . , N-1 and N, are odd numbered sub-fields and the sub-fields, which have the address period applying the scan pulse to the scan electrodes in order of N, N-1, . . . , 2 and 1, are even numbered sub-fields.

3. (Previously Presented) The method according to claim 1, wherein the sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of N in order of 1, 2, and N-1 and N, are even numbered sub-fields and the sub-fields, which have the address period applying the scan pulse to the scan electrodes in order of N, N-1, . . . 2 and 1, are odd numbered sub-fields.

4. (Previously Presented) A method of driving a PDP (Plasma Display Panel) including a pair of substrates, a plurality of address electrodes formed on one of the substrates, the address electrodes being divided into an upper part and a lower part, and scan electrodes to the number of N formed to intersect the address electrodes, wherein the method of driving comprises:

dividing a field of an input video signal into a plurality of sub-fields having brightness weights; and

applying a scan pulse to the scan electrodes to the number of N/2 intersecting the upper and lower address electrodes in order and simultaneously applying an input video data

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signal pulse to the upper and lower address electrodes, in each sub-field, to have an address period designating cells to be displayed and a sustain period applying a sustain pulse to the designated cells according to the brightness weight of the corresponding sub-field,

wherein the plurality of sub-fields include sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of $N/2$ intersecting the upper address electrodes in order of 1, 2, . . . , and $N/2$ and applying the scan pulse to the scan electrodes to the number of $N/2$ intersecting the lower address electrodes in order of $(N/2)+1$, . . . , and N , and sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of $N/2$ intersecting the upper address electrodes in order of $N/2$, . . . , 2 and 1 and applying the scan pulse to the scan electrodes to the number of $N/2$ intersecting the lower address electrodes in order of N , $N-1$, and $(N/2)+1$.

5. (Previously Presented) The method according to claim 4, wherein the sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of $N/2$ respectively intersecting the upper and lower address electrodes in order of 1, 2, . . . , and $N/2$ and in order of $(N/2)+1$, . . . , and N , are odd numbered sub-fields, and the sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of $N/2$ intersecting the upper address electrodes in order of $N/2$, . . . , 2 and 1 and in order of N , $N-1$, and $(N/2)+1$, are even numbered sub-fields.

6. (Previously Presented) The method according to claim 4, wherein the sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of $N/2$ respectively intersecting the upper and lower address electrodes in order of 1, 2, . . . , and $N/2$ and in order of $(N/2)+1$, . . . and N , are even numbered sub-fields, and the sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of $N/2$ intersecting the upper address electrodes in order of $N/2$, . . . , 2 and 1 and in order of N , $N-1$, and $(N/2)+1$, are odd numbered sub-fields.

7. (Previously Presented) A method of driving a PDP (Plasma Display Panel) including a pair of substrates arranged at a prescribed interval, a plurality of address electrodes formed on one of the substrates, the address electrodes being divided into an upper part and a lower part, and scan electrodes to the number of N formed to intersect the address electrodes, the method of driving comprising:

dividing a field of an input video signal into a plurality of sub-fields having brightness weights; and

applying a scan pulse to the scan electrodes to the number of $N/2$ intersecting the upper and lower address electrodes in order and simultaneously applying an input video data signal pulse to the upper and lower address electrodes, in each sub-field, to have an address period designating cells to be displayed and a sustain period applying a sustain pulse to the designated cells according to the brightness weight of the corresponding sub-field,

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wherein the plurality of sub-fields include sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of $N/2$ intersecting the upper address electrodes in order of $N/2$, $(N/2)-1$, . . . and 1 and applying the scan pulse to the scan electrodes to the number of $N/2$ intersecting the lower address electrodes in order of $(N/2)+1$, . . . and N , and sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of $N/2$ intersecting the upper address electrodes in order of 1, 2, . . . and $N/2$ and applying the scan pulse to the scan electrodes to the number of $N/2$ intersecting the lower address electrodes in order of N , $N-1$, and $(N/2)+1$.

8. (Previously Presented) The method according to claim 7, wherein the sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of $N/2$ respectively intersecting the upper and lower address electrodes in order of $N/2$, $(N/2)-1$, and 1 and in order of $(N/2)+1$, . . . and N , are odd numbered sub-fields, and the sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of $N/2$ intersecting the upper address electrodes in order of 1, 2, . . . and $N/2$ and in order of N , $N-1$, and $(N/2)+1$, are even numbered sub-fields.

9. (Previously Presented) The method according to claim 7, wherein the sub-fields, which have the address period applying the scan pulse to the scan electrodes to the number of $N/2$ respectively intersecting the upper and lower address electrodes in order of $N/2$, $(N/2)-1$, and 1 and in order of $(N/2)+1$, . . . and N , are even numbered sub-fields, and the sub-fields,

which have the address period applying the scan pulse to the scan electrodes to the number of $N/2$ intersecting the upper address electrodes in order of 1, 2, and $N/2$ and in order of N , $N-1$, and $(N/2)+1$, are odd numbered sub-fields.

10. (Currently Amended) A method of driving a PDP (Plasma Display Panel) having a plurality of scan electrodes divided in two, comprising:

applying a first scan pulse to each of the scan electrodes in ascending number order from 1 to [[N/2]] K during an addressing period of a first sub-field;

applying the first scan pulse to each of the scan electrodes in ascending number order from [[N/2]] K+1 to N during the addressing period of a first sub-field;

applying a second scan pulse to each of said scan electrodes in descending number order from N to [[N/2]] K+1 during an addressing period of a second sub-field; and

applying the second scan pulse to each of the scan electrodes in descending number order from [[N/2]] K+1 to 1 during the addressing period of the second sub-field.

11. (Previously Presented) The method according to claim 10, wherein charged particles generated by said first and second scan pulses are opposed to each other and reduce the amount of excess charged particles residually.

12. (Previously Presented) The method according to claim 11, wherein said reduction of excess charged particles prevents abnormal discharge or dielectric break down.

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13. (Previously Presented) The method according to claim 10, wherein N is 480.

14. (Previously Presented) The method according to claim 10, wherein said first scan pulse comprises multiple odd-numbered pulses.

15. (Previously Presented) The method according to claim 10, wherein said second scan pulse comprises multiple even-numbered pulses.

16. (Previously Presented) The method according to claim 10, wherein said first scan pulses occur in odd numbered sub-fields of a field.

17. (Previously Presented) The method according to claim 10, wherein said second scan pulses occur in even numbered sub-fields of a field.

18. (Canceled)

19. (Currently Amended) A method of driving a PDP (Plasma Display Panel) having a plurality of scan electrodes divided in two, comprising:

applying a first scan pulse to each of the scan electrodes in ascending number order from 1 to [[N/2]] K during an addressing period of a first sub-field;

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applying the first scan pulse to each of the scan electrodes in descending number order from N to [[N/2]] K + 1 during the addressing period of the first sub-field;

applying a second scan pulse to each of said scan electrodes in descending number order from [[N/2]] K to 1 during an addressing period of a second sub-field; and

applying the second scan pulse to each of the scan electrodes in ascending number order from [[N/2]] K + 1 to N during the addressing period of the second sub-field.

20. (Previously Presented) The method according to claim 10, wherein said applying first scan pulse to said scan electrodes in ascending order from 1 to N occurs in 16.67 msec.

21. (New) The method as claimed in claim 19, further comprising:

applying at least one sustain pulse during a sustain period of the first sub-field, the sustain period of the first sub-field being after the address period of the first sub-field and before the address period of the second sub-field.

22. (New) The method as claimed in claim 19, wherein the first sub-field includes a single reset period, a single address period and a single sustain period, and the second sub-field includes a different single reset period, a different single address period, and a different single sustain period.

23. (New) The method as claimed in claim 19, wherein the second sub-field is a different sub-field than the first sub-field.

24. (New) The method as claimed in claim 19, wherein K is N/2 and N corresponds to a number of all scan lines.

25. (New) The method as claimed in claim 10, further comprising:
applying at least one sustain pulse during a sustain period of the first sub-field, the sustain period of the first sub-field being after the address period of the first sub-field and before the address period of the second sub-field.

26. (New) The method as claimed in claim 10, wherein the first sub-field includes a single reset period, a single address period and a single sustain period, and the second sub-field includes a different single reset period, a different single address period, and a different single sustain period.

27. (New) The method as claimed in claim 10, wherein the second sub-field is a different sub-field than the first sub-field.

28. (New) The method as claimed in claim 10, wherein K is N/2 and N corresponds to a number of all scan lines.